

File



June 16, 2016

VIA FEDEX
DELIVERY CONFIRMATION REQUESTED

Mark J. Hague, Regional Administrator
USEPA, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

Re: PCB Risk-Based Cleanup and Disposal 761.61(c) Plan
Bayer CropScience, Kansas City, Missouri
EPA ID No. MOD056389828

Dear Mr. Hague:

The purpose of this submission is to provide background information related to a recent small release of transformer fluid at Bayer CropScience's Kansas City plant and to outline actions planned to remediate the affected media in accordance with 40 CFR 760.61. The fluid may have contained PCBs. The plan was developed following the USEPA Region 1 Risk-Based Cleanup and Disposal Approval 761.61(c) Checklist (dated September 27, 2011) as requested by Region 7 staff. A copy of this plan has been sent to the Missouri Department of Natural Resources.

Please contact me at (919) 356-7293 or via email at mark.bowers@bayer.com if you have any questions concerning this matter.

Freundliche Grüße / Best regards,

A handwritten signature in black ink, appearing to read "Mark Bowers".

Mark Bowers, M.S., CIH
Remediation Manager
Bayer CropScience LP

Bayer CropScience
2 T.W. Alexander Drive
Durham, NC 27709
United States

+1-919-549-2215
mark.bowers@bayer.com
www.cropscience.bayer.com

Board of Management:
Liam Condon,
Chairman
Bernd Naaf
Michael A. Schulz

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Supervisory Board:
Werner Baumann

Registered Office:
Monheim am Rhein
Local Court of Düsseldorf
HRB 46985

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JUN 20 2016

AWMD/RCAP

cc: Via electronic copy –

Robert Lockemer, Bayer CropScience

Richard H. Rocha, Bayer CropScience

Paul E. Nagy, Bayer CropScience

David Cockrill, Bayer CropScience

Chintan Amin, Esq., Bayer Corporation

Baerbel E. Schiller, Esq., Spencer Fane LLP

John P. Shonfelt, P.G., Arcadis

Michael Dandurand, USEPA Region 7

Mary Grisolano, USEPA Region 7

Richard A. Nussbaum, P.E., R.G., Missouri DNR, Hazardous Waste Program
File

RISK-BASED CLEANUP AND DISPOSAL PLAN 761.61(c)

BAYER CROPSCIENCE LP
8400 Hawthorn Road
Kansas City, Missouri 64120

1.0 Site History and Background

At the Bayer CropScience facility located in Kansas City, a 388 gallon capacity pad-mounted electrical transformer provides critical service power to the site's wastewater treatment plant. On May 6, 2016, a small release of transformer fluid was noted by plant staff. An estimated 1 gallon of R-Temp fluid (Attachment 1) was released. The source of the release (a loose fitting) was quickly identified and actions were taken to stop it. In addition, the following actions were taken to prevent contaminant migration:

- Sorbent socks were placed on the pad
- Sand bags were installed along the perimeter of the transformer fence to prevent intrusion of water in the event of ponding
- A tent was placed over the entire installation to prevent rainfall from contacting affected media
- The fence around the transformer was secured to prevent unauthorized entry

A more expansive response action was not possible due to health and safety concerns related to electrical hazards near the energized transformer system.

2.0 Nature of Contamination

The R-Temp fluid (retrofill) was tested on April 10, 2013 by United Power Services, Inc. using ASTM Method D4059 and was found to contain 84 ppm PCB (Attachment 2). The release of the transformer fluid was contained to the corner of the concrete pad as well as a less than 10 square foot area of gravel and underlying soil. Based on the volume and fluid composition, less than 0.5 grams (<0.001 pounds) of PCBs were released; most of which is believed to have been captured by the sorbent materials mentioned above.

3.0 Summary of Standard Operating Procedures

No pre-removal characterization sampling has been performed. The extent of the release was readily estimated based upon visual evidence as described above.

4.0 Site Maps

Figure 1 shows the location of the transformer in relation to other plant features. Figure 2 provides a more detailed view of the transformer location, proposed areal extent of excavation work, and the proposed location of three (3) post-excavation soil sampling points (see Section 11.0).

5.0 Cleanup Plan

The subject transformer and pad were slated for near term replacement as part of the plant's standard schedule and will be replaced. Visually impacted gravel and soil plus a one foot perimeter buffer to a minimum depth of at least six inches will be excavated and containerized. Those materials along with affected portions of the concrete pad will be disposed at an offsite facility authorized to accept bulk PCB remediation waste. Dependent upon confirmation sample results, additional removal will be performed. The proposed cleanup target is 1 ppm; high occupancy standard per 40 CFR 761.61. These activities will be performed within 90 days after the unit is de-energized or the plan is approved (whichever is later). If higher than expected PCB concentrations are found, use of the low occupancy standard (25 ppm) or alternative remedial measures may be proposed and implemented with USEPA concurrence. All remediation equipment will be either disposed of, or decontaminated before leaving the site. Decontamination will follow 40 CFR §761.79(c).

6.0 Evaluation of PCB Cleanup Alternatives

No formal evaluation was performed. Due to the small scale of the remedial action, affected soil and gravel will be excavated, containerized and disposed offsite per TSCA requirements. A conservative approach will be followed using the high occupancy soil standard as the planned remedial goal. An iterative approach will be followed if confirmation sampling indicates the goal is not met initially. The concrete pad will be removed in its entirety with the affected portion disposed offsite per TSCA requirements. Based upon the released material composition, it is anticipated that disposal will be in accordance with 40 CFR 761.61(a)(5)(v)(A) with waste concentrations less than 50 ppm. This will be verified through characterization post-removal.

7.0 Engineered Cap

Not applicable since there will not be a cap installed.

8.0 PCB Encapsulation

Not Applicable

9.0 Written Certification

The methods used and results of all sampling and analysis activities will be maintained at the Bayer CropScience Kansas City Plant, 8400 Hawthorne Road, Kansas City, Missouri 64120 for agency inspection upon request. Specific information will include:

- Sampling Plan
- Sample Collection Procedures
- Sample Preparation Procedures
- Extraction Procedures
- Chemical Analysis Procedures

The records will be kept in the form of field notes, chain of custody documentation and laboratory analytical data packages.

Written certification requirement is fulfilled by way of signature on Bayer's letter transmitting this Plan to the USEPA.

10.0 Subpart Q Alternative Method

Not Applicable

11.0 QA/QC Plan for Documenting Cleanup Level Attainment

Due to the scale of the proposed remedy, three discrete soil samples will be collected from the base of the excavation to verify the cleanup level has been attained. Figure 2 shows the approximate sampling locations. The samples will be obtained from the 0 to 3 inch depth interval using disposable plastic trowels or spoons. The samples will be thoroughly mixed and at least 100 grams will be placed in a glass jar, labeled (ID, date/time, sampler, required analysis) and shipped to the analytical laboratory under chain of custody. A duplicate sample will be created by containerizing a second portion of soil (handled in the same manner) obtained from one location to gauge overall precision of the sampling and analysis process.

The selected laboratory will perform extraction using USEPA Methods 3500C and either 3540C (Soxhlet) or 3550C (ultrasonic). Analysis will be in accordance with USEPA Method 8082. The Aroclor-specific sample quantitation limit will be less than 0.3 ppm barring matrix or other interferences. A batch matrix spike/ matrix spike duplicate (MS/MSD) pair will also be analyzed by the lab to assess accuracy and precision of the analytical process. Duplicate and MS/MSD performance criteria will be as follows:

- Duplicate: <35% relative percent difference (RPD)
- Matrix spike: 29 to 135% recovery (Aroclor specific)
- Matrix spike duplicate: <20% RPD

Bulk PCB remediation waste characterization will be conducted using similar sampling and analytical methods. One or more aliquots representative of the entire mass of material will be obtained, mixed and submitted for analysis to determine disposal requirements.

Data validation will include comparison of lab results to the stated criteria, evaluation of analytical performance indicators (per USEPA method requirements), review of other results (i.e., blanks) and a review of quantitation limit adequacy in relation to the cleanup goal. Other factors that could affect the precision, accuracy, representativeness, completeness and comparability of the data will also be assessed applying method and National Functional Guidelines criteria for PCB analysis in solid media criteria (where applicable).

All sampling equipment will be either one-use and disposed of, or will be decontaminated before leaving the site per 40 CFR 761.79(c). All field activities will be recorded in a bound logbook and a chain of custody record will be created for each sample shipment. Copies of all documentation will be retained in the project file along with photographs (hard copy or electronic), laboratory analytical reports and any disposal-related materials (manifests, certificates of disposal).

12.0 Human Health and Ecological Risk Assessment

Not applicable.

13.0 Third Party Cleanup Authorization

Not Applicable. Bayer CropScience (or direct contractor) will perform all required work.

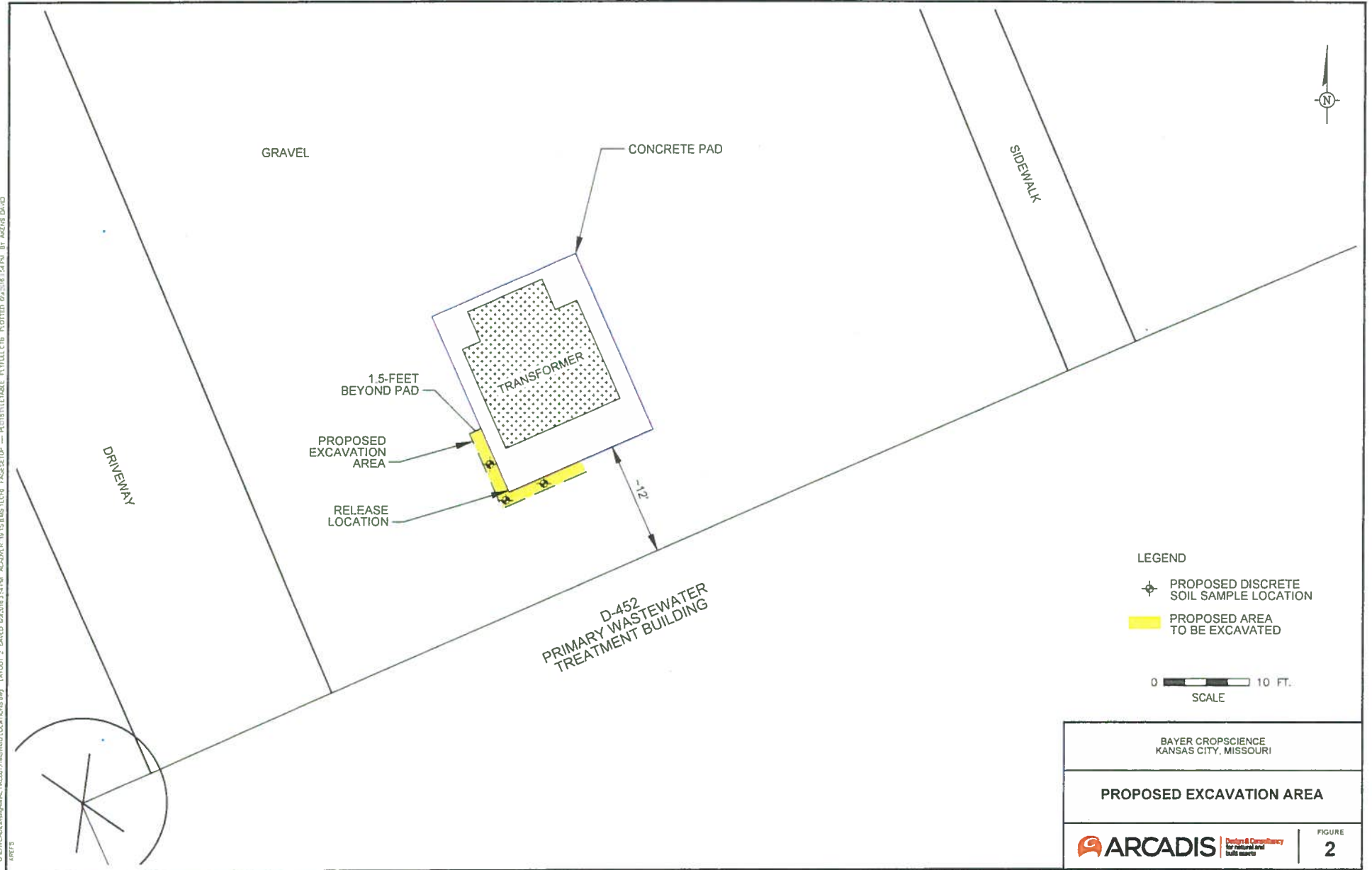
Figures

1. Transformer Release Area
2. Proposed Excavation Area

Attachments

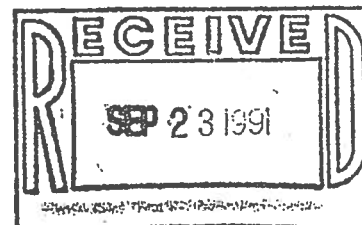
1. R-Temp Fluid MSDS
2. Transformer Testing Report - United Power Services, Inc.

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COOPER POWER SYSTEMS



MATERIAL SAFETY DATA SHEET

MANUFACTURER:
Cooper Power Systems-RTE Fluids
1319 Lincoln Avenue
Waukesha, Wisconsin 53186-5386

Emergency Number:
(414) 549-5000

PRODUCT IDENTIFICATION

Trade Name: R-TEMP® FLUID

Synonyms: High Molecular Weight Hydrocarbon Dielectric Fluid, Fire-Resistant Hydrocarbon Fluid

Chemical Family: Deep solvent-extracted paraffinic hydrocarbon

Molecular Formula: Mixture of paraffinic hydrocarbons and additives

INGREDIENTS

CAS Registry No.	%W	%V	Identification	Carcinogen per NTP, IARC, OSHA
64741-88-4	>98	>98	Deep solvent refined paraffinic petroleum	not listed
128-37-0	<1	<1	*DBP	not listed
**	<1	<1	Flow modifier	not listed

*Also known as BHT, butylated hydroxy toluene

**EPA confidential CAS accession number: 22130

PHYSICAL DATA

Boiling point: wide range

Vapor Pressure: <0.001 psi @ 20 C.

Vapor Density (air = 1): 18

Solubility in water: very low

Appearance and odor: Viscous, odorless, translucent, straw-colored liquid

Specific Gravity: 0.876

Percent Solid by wt: 0.0

pH: 7.0

Percent Volatile (v/v): nil

FIRE AND EXPLOSION DATA

ASTM D-92 Flash/Fire points

285/312 degrees Celsius (typical)
545/594 degrees Fahrenheit

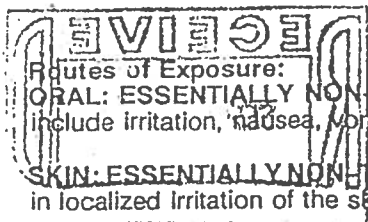
Recommended fire extinguishing medium: Dry chemical or CO₂ foam. Use water spray to cool exposed containers, nearby structures and to protect personnel. Use water to flush spills away from sources of ignition.

FIREFIGHTING PRECAUTIONS: Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus with full face mask and full protective equipment.

REACTIVITY DATA

Stability: R-Temp fluid is stable under normal conditions of use. Avoid contact with strong oxidizing agents.

DECOMPOSITION PRODUCTS: Products of complete combustion of R-Temp fluid are carbon dioxide and water. Products of incomplete combustion include these compounds plus volatile hydrocarbons, carbon monoxide, and small amounts of polynuclear aromatic hydrocarbons. Quantities and types of combustion products of R-Temp fluid have been shown to be less than those for equivalent amounts of conventional transformer oil.



HEALTH HAZARD DATA

Routes of Exposure:

ORAL: ESSENTIALLY NON-TOXIC. Rat oral LD50 >5 grams/Kg. May cause gastrointestinal distress. Symptoms may include irritation, nausea, vomiting and diarrhea.

SKIN: ESSENTIALLY NON-TOXIC. Estimated rabbit dermal LD50 >5 grams/Kg. Repeated or prolonged contact may result in localized irritation of the skin. May cause allergic reactions in some individuals.

EYES: Slightly irritating. Avoid contact.

INHALATION: May cause respiratory tract irritation. Exposure to dense oil mist may lead to respiratory problems.

SPECIAL TOXIC EFFECTS: None

CARCINOGENIC/MUTAGENIC POTENTIAL: Essentially none.

FIRST AID

INGESTION: Do not induce vomiting. If spontaneous vomiting occurs, monitor the subject for breathing difficulty. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash area of contact thoroughly with soap and water. If irritation is present, get medical attention. Thermal burns require immediate medical attention.

EYE CONTACT: Flush the eyes immediately with large amounts of water with the eyelids held away from the eye to ensure thorough rinsing. If irritation persists, get medical attention.

INHALATION: Remove affected person from source of exposure. Get medical attention if irritation persists.

PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Wear safety glasses or goggles to prevent eye contact. Eye baths should be readily available in the area of handling R-Temp fluid.

SKIN PROTECTION: As with any petroleum product, oil-impervious clothing is recommended to prevent skin contact.

RESPIRATORY PROTECTION: Use MSHA/NIOSH approved equipment when working in areas of heavy oil mist. Ventilation can be used to control or reduce airborne concentrations of oil.

ENVIRONMENTAL AND DISPOSAL INFORMATION

SPILL OR RELEASE TO THE ENVIRONMENT:

Combine and recover any free liquid. There is no CERCLA reportable quantity of R-Temp fluid.

For technical advice, and assistance related to the spill, contact CHEMTREC (800-424-9300) and your local fire department.

With small spills, absorb the fluid with sand or clay absorbent, then flush the area with water. With large spills, dike the area ahead of the spill to contain its flow.

A spill or release of any petroleum fluid to navigable waters of a quantity sufficient to cause a sheen upon the water's surface must be reported immediately to the National Response Center (800-424-8802). Failure to report may result in civil or criminal penalties.

WASTE DISPOSAL: R-Temp fluid, when discarded or disposed of, is not listed as a hazardous waste per 40 CFR 261.33.

HANDLING AND STORAGE: Avoid extremes of temperature in storage. Store R-Temp fluid in tightly closed containers in cool, dry, isolated and well ventilated areas, away from sources of ignition or heat. Do not store in unlabeled containers.

This Material Safety Data Sheet has been prepared in order to help the users of R-Temp fluid. The data contained herein is accurate as of the date of preparation of this sheet.

Effective Date: March 14, 1991



Completed by David Sundin, Fluids Dept. Manager

R-Temp Fluid Material Safety Data Sheet Supplement

The following is an explanation of the information contained on the R-Temp fluid Material Safety Data Sheet. This information is provided to enable you to identify and compare the risks associated with some other types of dielectric fluids.

Additional technical information concerning the handling, use, maintenance, reprocessing and disposal of R-Temp fluid can be found in the R-Temp Fluid Technical Manual, available from RTE Fluids.

An explanation of each section of the Material Safety Data Sheet follows:

Manufacturer:

The manufacturer of R-Temp fluid is RTE Fluids, which is part of Cooper Power Systems, Inc. The mailing address is listed, as is a phone number to call for technical information. This number is answered from 8:00 am to 5:00 pm CST, Monday through Friday, except on scheduled holidays.

Trade Name, Synonyms, and Formula:

This product is properly known as R-Temp fluid. R-Temp fluid is biodegradable, essentially nontoxic and easy to dispose of. It is generically referred to as a "High Molecular Weight Hydrocarbon Dielectric Fluid" or as a "Fire Resistant Hydrocarbon Fluid". It is classified as a less-flammable transformer insulating liquid for transformer installation by National Electrical Code Section 450-23, Less-Flammable Liquid-Insulated Transformers.

R-Temp fluid is manufactured from a natural, biodegradable paraffinic hydrocarbon. A special refining method is used to process a highly refined, natural petroleum oil into R-Temp fluid base oil. R-Temp fluid is a mixture of this base oil and additives giving it its excellent functional characteristics. The additives used are listed in the "Ingredients" table. A small amount of the fluid is an antioxidant, the same as is used in nearly every brand of conventional transformer oil sold in the U.S. A trace of a flow modifier is added to improve the low-temperature flow characteristics of R-Temp fluid. Both additives are biodegradable and nonhazardous in the concentrations in which they are found in R-Temp fluid.

Physical Data:

This section contains information on R-Temp fluid's physical characteristics. Being derived from natural petroleum, R-Temp fluid displays a wide range of boiling points. At atmospheric pressure, the fluid begins to boil at about 450 °Celsius (842 ° Fahrenheit) and will continue to boil until about 800 °C. (1472 °F.) It has a very low vapor pressure, less than 0.001 psi at 20 °C, due to its high molecular weight. The vapor density is eighteen times that of air's density. R-Temp fluid is only slightly soluble in water. The specific gravity of R-Temp fluid is 0.876.

It contains no solid material. R-Temp fluid is a bland, essentially nonreactive, innocuous hydrocarbon. Its pH is 7.0. It contains no volatile matter.

R-Temp fluid appears as a translucent, light amber colored fluid. It has only a slight petroleum odor.

Fire and Explosion Data:

The typical flash and fire points of R-Temp fluid are 285 and 312 degrees Celsius (545 and 594 °F.) respectively, measured in accordance with ASTM D92. These high values give R-Temp fluid its fire-resistant properties.

Even though R-Temp fluid has excellent fire resistant properties, it is not nonflammable. It is possible for any material to burn, when exposed to certain conditions, even those such as teflon or askarel fluids. A fire involving R-Temp fluid should be treated as any petroleum material would be; using dry chemical and foam extinguishers. Water should be used to cool exposed containers of R-Temp fluid or other material and to protect exposed personnel.

Although R-Temp fluid does not produce unusual toxic or hazardous fire decomposition products, firefighters should take the standard precaution of wearing a self-contained breathing apparatus that has been approved by the Mine Safety Health Administration (MSHA) and the National Institute of Occupational Safety and Health (NIOSH).

Reactivity Data:

R-Temp fluid is stable under normal conditions of use. Its properties will not change when stored. Its shelf life is indefinite. The products of complete combustion of R-Temp fluid are the same as with any hydrocarbon fluid, carbon dioxide and water. Incomplete combustion will produce these compounds and small amounts of low molecular weight hydrocarbons, carbon monoxide and polynuclear aromatic hydrocarbons. Testing has shown that the quantity and types of combustion products from R-Temp fluid are less than those for equivalent amounts of conventional transformer oil.

Health Hazard Data:

R-Temp fluid is essentially innocuous and non-toxic. Tests have shown that it has very little or no effect on test animals, whether administered orally (as food) or dermally (applied to the animal's skin). The LD₅₀ value for orally administered R-Temp fluid is more than 5 grams of fluid per kg. of animal weight. The primary reaction expected to orally administered R-Temp fluid would be a laxative effect, plus possible stomach cramps and nausea.

Tests performed on R-Temp fluid have indicated that it is not mutagenic to laboratory animals. The International Agency for Research on Cancer (IARC) has studied fluids similar to R-Temp fluid and have found no evidence of carcinogenic activity or potential.

When applied to skin, there is virtually no reaction to R-Temp fluid. Some people, however, are allergic to petroleum oil and would exhibit an acne-like condition on their skin. Precautions to take would include removing all oil-soaked clothing and thorough washing with soap and water. Of course, hot R-Temp fluid could cause thermal burns, which should be treated as such.

If R-Temp fluid gets in the eyes, they should be thoroughly flushed with large amounts of water. The eyelids should be held away from the eye itself, to make sure that the rinsing is thorough. If irritation persists, consult a doctor.

If R-Temp fluid mist is inhaled, remove the person from the source of the exposure to an area of fresh air. If the person's lungs are irritated, consult a doctor, as a condition known as "oil pneumonia" may result.

Personal Protection Information:

Workers handling R-Temp fluid should wear safety goggles to prevent R-Temp fluid from accidentally splashing into their eyes. As with any petroleum or chemical product, eye baths should be available to quickly flush away any accidental fluid that contacts the eyes.

Oil-impervious clothing (rubberized aprons, boots, and gloves) should be worn when working with any petroleum or chemical product.

When a heavy oil mist is present, workers should wear MSHA approved breathing apparatus. Rooms should be well-ventilated to prevent a heavy concentration of oil mist.

Environmental Information:

In case of an accidental spill of R-Temp fluid on the ground, combine and dispose of any free fluid. Superfund agencies (CERCLA) do not have to be reported, as there is no minimum CERCLA reportable amount of R-Temp fluid. For technical assistance for any spill, a phone number for CHEMTREC (Washington, D.C.) has been listed on the MSDS. They will assist you in recovery and disposal of a chemical or petroleum spill by providing any information that you may need, free of charge.

Small fluid spills can be contained with earthen dikes or spill-absorbing pillows, etc.

By law, any spill that is of sufficient quantity to cause a sheen on a navigable waterway must be reported to the National Response Center (1-800-424-8802). Contacting this office will help ensure compliance with federal statutes that govern environmental spills of petroleum or chemicals.

Waste Disposal:

R-Temp fluid is not listed as a hazardous waste per 40 CFR 261.33. R-Temp fluid may be sold to a waste oil handler, to be reprocessed and used as a lubricant. R-Temp fluid may be burned in an industrial boiler without concern of a high concentration of residue such as silica ash.

Handling and Storage:

R-Temp fluid should be stored in tightly closed containers in cool, dry, isolated and well ventilated areas, away from sources of ignition or heat. Do not store R-Temp fluid in unlabeled containers. Bulk storage tanks that contain R-Temp fluid should be labeled as such.

Questions concerning the use, storage, handling, processing or disposal of R-Temp fluid should be directed to RTE Fluids at (414) 549-5000.

United Power Services, Inc
Oil Test Report

CUSTOMER: BAYER CORPORATION			LOCATION: KANSAS CITY			MO			UPSI #: 0000016		
SUB NAME: SITE 2 PRIMARY WASTE			CO EQUIP #: D-452-T1						CUST.ID: MO100057		
MFG:	WESTINGHOUSE		HIGH VOLT:	13200		# FANS:	0		GROUND:	X	
S/N:	TAV483-01		LOW VOLT:	480Y/277		GAS HEADSPACE:	Yes		OUTSIDE:	X PADMOUNT	
GAL:	388		IMPED:	5 0		WATER COOLED:	No		INSIDE:		
LIQUID:	R-Temp		KVA:	750		BUSHINGS T/S:	Side		PLATFORM:		
VALVES:	3/4"B		PHASE/CYCLE:	3/60		CONS. TANK:	No		POLE:		
DATE MFR:			WELDED LID:	Yes		PHYSICAL DIM:	2X4X6		ROOF:		
EQUIP TYPE:TRANS			# RADS:	ENCL		WEIGHT:			ACCESS:	50'	

VISUAL INSPECTION DATA											RECOMMENDED SERVICE
DATE	OPERATING TEMP	PEAK TEMP	ACTUAL TEMP	FLUID LEVEL	PSI VAC	PAINT	BUSHINGS	ENVIR.	LEAKS / COMMENTS		
01/16/2013	16	54		Norm	0	Good	Clean	Clean	None		Inspect 1 yr
04/10/2013	26	54		Norm	0	Good	Clean	Clean	None		Inspect 1 yr
03/28/2014	23	54		Norm	0	Good	Clean	Clean	None		Inspect 1 yr
05/15/2015									No sample per customer request		

LIQUID TEST DATA														RECOMMENDED SERVICE	
DATE	D877 DIEL	D1816 1mm	D1816 2mm	D974 NN	D971 IFT	D1500 COLOR	D1524 VISUAL	D1298 SG	D924 PF25	D924 PF100	D1533 H2O	D4768 DBPC	CLASSIFICATION		
02/04/2011	52			0.060	41.9	5.0	Clear	0.880	0.081	2.635	5			Good	Retest 1 Year
02/06/2012	36			0.040	36.4	4.5	Clear	0.876	0.030	3.769	2			Good	Retest 1 Year
01/16/2013	48			0.032	34.4	4.5	Clear	0.880	0.030	3.281	13			Good	Retest 1 Year
03/28/2014	51			0.040	33.1	4.5	Clear	0.880	0.021	3.792	2			Good	Retest 1 Year

PCB CONTENT ASTM D4059							TOTAL CONTENT (PPM)
DATE	CERTIFICATE NUMBER	1242 AROCLOR	1254 AROCLOR	1260 AROCLOR	OTHER		
01/16/2013	197404	69	5				74
04/10/2013	197480	74	9	1			84

DISSOLVED GAS ANALYSIS ASTM D3612 (PPM)														Rogers Ratio
DATE	METHOD	HYDROGEN H2	METHANE CH4	ETHYLENE C2H4	ETHANE C2H6	ACETYLENE C2H2	CARBON MONOXIDE	TOTAL COMB. GAS	CARBON DIOXIDE	NITROGEN N2	OXYGEN O2	TOTAL DISV. GAS%	C2H2/C2H4	C4H4/C2H6

615-255-3700

817 Fesslers Parkway
Nashville, TN 37210

800-873-8774
Lab Navigator v. 1.7.0

United Power Services, Inc
Oil Test Report

CUSTOMER: BAYER CORPORATION

LOCATION: KANSAS CITY

MO

UPSI #: 0000016

SUB NAME: SITE 2 PRIMARY WASTE

CO EQUIP #: D-452-T1

CUST. ID: MO100057

DISSOLVED GAS ANALYSIS ASTM D3612 (PPM)

DATE	METHOD	HYDROGEN	METHANE	ETHYLENE	ETHANE	ACETYLENE	CARBON	TOTAL	CARBON	NITROGEN	OXYGEN	TOTAL	Rogers Ratio		
		H2	CH4	C2H4	C2H6	C2H2	MONOXIDE	COMB. GAS	DIOXIDE	N2	O2	DISV. GAS%	C2H2/C2H4	CH4/H2	C2H4/C2H6
02/04/2011	D3612C	3	8	4	5	0	96	116	5524	65956	5589	7.7	0.0	2.7	0.8
02/06/2012	D3612C	2	9	5	7	0	104	127	6056	59800	3511	6.9	0.0	4.5	0.7
01/16/2013	D3612C	0	8	4	4	0	87	103	4941	46898	2625	5.5	0.0	0.0	1.0
03/28/2014	D3612C	2	10	5	7	0	119	143	6290	57519	2967	6.7	0.0	5.0	0.7

COMMENT: 03/14 Low level combustible gases indicate unit operating properly. Retest 1 year.

ICP METAL IN OIL ANALYSIS (PPM)

DATE	ALUMINUM	COPPER	IRON	LEAD	SILVER	TIN	ZINC	SILICON
02/04/2011	0	0.05	0.06	0	0	0	0.62	
02/06/2012	0	0	0	0	0	0	0.21	
01/16/2013	0	0.07	0	0	0	0	0.41	
03/28/2014	0	0.05	0	0	0	0	0.66	

COMMENT: 03/14 Above normal zinc value. Possible source includes tank or connectors. Detection limit 0.050 ppm.

ORIGIN ID: MKEA (919) 549-2485
 BETH ADAMS
 BAYER CROSCIENCE
 21 W ALEXANDER DRIVE
 PO BOX 12014
 RESEARCH TRIANGLE PA, NC 27709
 UNITED STATES US

SHIP DATE: 17 JUN16
 ACTWGT: 1.00 LB
 CAD: 7347108INET 3730
 BILL SENDER

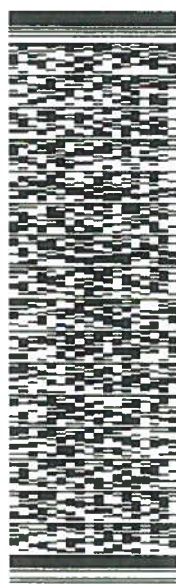
TO **MARK HAGUE**
 US EPA REGION VII AIR, RCRA AND TOX
 11201 RENNER ROAD

LENEXA KS 66219

(913) 551-7857
 INV
 PO

REF

DEPT



3161016028561uv

540J2J30BD727F

TRK#
 0201 7765 4530 3684

MON - 20 JUN 3:00P

STANDARD OVERNIGHT

XH IXDA

66219
 KS-US MCI



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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.